Journal of Algorithms

Editors: ZVI GALIL • DAVID S. JOHNSON • DONALD E. KNUTH

Editorial Board

L. M. Adleman
B. Awerbuch
E. Bach
B. M. Chazelle
C. Dwork
D. Eppstein
S. Even
M. Farach
J. Feigenbaum
H. N. Gabow
A. V. Goldberg
R. L. Graham
L. J. Guibas
H. Imai
H. Karloff
D. J. Kleitman
F. T. Leighton
E. M. Luks
G. L. Miller
A. Odlyzko
M. S. Paterson
H. Prodinger
M. Rabin
R. Sedgewick
E. Shamir
U. Vishkin
J. Vuillemin
H. S. Wilf
S. Winograd
F. F. Yao

VOLUME 17, 1994

ACADEMIC PRESS

San Diego New York Boston London Sydney Tokyo Toronto

Copyright © 1994 by Academic Press, Inc.
All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (222 Rosewood Drive, Danvers, Massachusetts 01923), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1994 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0196-6774/94 $6.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.

CONTENTS OF VOLUME 17

NUMBER 1, JULY 1994

DEXTER KOZEN. Editor's Foreword 1

JOSEPH C. CULBERSON AND ROBERT A. RECKHOW. Covering Polygons Is Hard 2

MICHAEL L. FREDMAN AND DEBORAH L. GOLDSMITH. Three Stacks. 45

SETH M. MALITZ. Graphs with E Edges Have Pagenumber $O(\sqrt{E})$. 71

SETH M. MALITZ. Genus g Graphs Have Pagenumber $O(\sqrt{g})$ 85

YORAM MOSES AND ORLI WAARTS. Coordinated Traversal: $(t + 1)$-Round Byzantine Agreement in Polynomial Time 110

F. T. LEIGHTON, BRUCE M. MAGGS, ABHIRAM G. RANADE, AND SATISH B. RAO. Randomized Routing and Sorting on Fixed-Connection Networks 157

PAPERS TO APPEAR IN FORTHCOMING ISSUES 206

NUMBER 2, SEPTEMBER 1994

F. GAVRIL, V. TOLEDANO LAREDO, AND D. DE WERRA. Chordless Paths, Odd Holes, and Kernels in Graphs without m-Obstructions 207

GUY KORTSARZ AND DAVID PELEG. Generating Sparse 2-Spanners 222

DAVID EPPSTEIN. Offline Algorithms for Dynamic Minimum Spanning Tree Problems 237

TZE-HENG MA AND JEREMY P. SPINRAD. On the 2-Chain Subgraph Cover and Related Problems 251

E. T. KOFLER AND C. T. LEONDES. Algorithmic Modifications to the Theory of Evidential Reasoning 269

SAMIR KHULLER, UZI VISHKIN, AND NEAL YOUNG. A Primal–Dual Parallel Approximation Technique Applied to Weighted Set and Vertex Covers 280

PAPERS TO APPEAR IN FORTHCOMING ISSUES 290

Number 3, November 1994

Greg N. Frederickson. Editor's Foreword 291

Pankaj K. Agarwal, Micha Sharir, and Sivan Toledo. Applications of Parametric Searching in Geometric Optimization 292

Eldad Bar-Eli, Piotr Berman, Amos Fiat, and Peiyuan Yan. Online Navigation in a Room 319

Hanna Baumgarten, Hermann Jung, and Kurt Mehlhorn. Dynamic Point Location in General Subdivisions 342

Piotr Berman and Viswanathan Ramaiyer. Improved Approximations for the Steiner Tree Problem 381

Martin Fürer and Balaji Raghavachari. Approximating the Minimum-Degree Steiner Tree to within One of Optimal 409

Jianxiu Hao and James B. Orlin. A Faster Algorithm for Finding the Minimum Cut in a Directed Graph 424

V. King, S. Rao, and R. Tarjan. A Faster Deterministic Maximum Flow Algorithm 447

Mihalis Yannakakis. On the Approximation of Maximum Satisfiability 475

Papers to Appear in Forthcoming Issues 503

Author Index for Volume 17 504